

## Progressive Watermark Decoding on a Distributed Computing Platform

### *Abstract of the Disclosure*

The disclosure describes a method of progressively decoding a digital watermark on a distributed computing platform. A client device equipped with a digital camera, such as a PDA or cell phone, captures a digital image of a watermarked object, and pre-filters the image to isolate a portion of the image data suspected of containing a digital watermark. The pre-filter de-correlates a portion of the image data suspected of containing a digital watermark from the remaining host image signal using a predictive filter. The client then quantizes the filtered data and progressively transmits the quantized data to a watermark decoder. The progressive transmitter sends image data as necessary to achieve a valid decoding operation. To reduce bandwidth requirements, the transmitter starts with the most highly quantized version of the filtered image, and sends lesser quantized versions until the watermark decoder completes a successful decoding operation.